SIEMENS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Inventor:	T. Ahrndt	)	Confirmation No:	9892
		)		
Serial No.:	10/530,740	)	Examiner:	S. Taha
		)		
Filed:	October 13, 2005	)	Group Art Unit:	2446

Title   DEVICE AND METHOD FOR CONTROLLING AN AUTHENTICATION IN A TELECOMMUNICATIONS NETWORK

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

APPELANTS BRIEF

This Appeal Brief relates to an appeal from the rejection of claims 29, and 32-43 in the Office Action mailed January 4, 2010.

I.   Real Party in Interest

The real party in interest is Siemens Aktiengesellschaft of Munich, Germany, the assignee of record.

II.   Related Appeals and Interferences

There are no known related appeals or interferences.

III.   Status of Claims

Claims 1-28, 30 and 31 have been canceled. Claims 29, 32-43 are rejected. No claims have been allowed. Claims 29, 32-43 are being appealed.

IV.   Status of Amendments

No amendment has been filed subsequent to the rejection.

V.   Summary of Claimed Subject Matter

Applicant respectfully submit that pages, line numbers and paragraphs used herein to reference Applicants specification is in regards to the Substitute Specification filed April 8, 2005.

A. Claim 29

Referring to page 4, lines 14-30, page 5 lines 14-18, line 30 - page 6 line 2, FIG 1, and FIG 2, independent claim 29 recites a method for controlling an authentication in a telecommunications network, comprising:

providing, at a subscriber terminal device (1), an external data transmission interface (WAN), the external data transmission interface (WAN) having a physical data transmission channel and an authentication channel configured to interface with a telecommunications network;

connecting the subscriber terminal device (1) to an internet service provider (6), the connection by the external data transmission interface (WAN) to the internet service provider (6) via a telecommunications central office exchange (3);

monitoring data traffic (Te) received on the external data transmission interface (WAN) and which is received by the subscriber terminal device (1); and

controlling logon/logoff procedures in the authentication channel based on the monitored data traffic; and

disconnecting the subscriber terminal device (1) from the internet service provider (6) by a logoff procedure in the authentication channel when no data traffic is received within a duration of time.

B. Claim 37

Referring to page 4, lines 14-30, page 5 lines 14-18, line 30 - page 6 line 2, FIG 1, and FIG 2, independent claim 37 recites a customer premises equipment, comprising:

a data processing unit (5);

an xDSL modem (1) having a first interface and a second interface,

the first interface (LAN) for a connection between the xDSL modem (1) and the data processing unit (5) in order for the xDSL modem (1) to receive a first data traffic (Ti),

the second interface (WAN) for a connection between the xDSL modem and an internet service provider (6) via a telecommunications network exchange (3) in order for the xDSL modem to receive a second data traffic (Te), the second interface has an authentication channel in a layer higher than a physical data transmission layer;

the xDSL modem (1) transfers data between the telecommunications network and the data processing unit (5) based on the first and second data traffic (Ti, Te), and

a control unit (4) that monitors the first data traffic (Ti) or the second data traffic (Te) and automatically controls a logon procedure and a logoff procedure in the authentication channel based on the monitored traffic (Ti, Te),

wherein when data traffic is not detected within a duration of time the control unit (4) sends a control signal (S) to the xDSL modem (1) and the xDSL modem (1) starts the logoff procedure which is carried out in the authentication channel, thereby causing the connection between the xDSL modem (1) and the internet service provider (6) to be logged off.

VI. Grounds for Rejection to be Reviewed

Claims 29, 33-40, 42, and 43 are rejected under 35 U.S.C. § 103(a) as being obvious over Tang et al. (US 2004/0059821), in view of Komine et al. (US 7,281,027) and further in view of Sugikawa et al. (US 5,949,772).

Claims 32 and 41 are rejected under 35 U.S.C. § 103(a) as being obvious over Tang, in view of Komine further in view of Sugikawa and further in view of Humphery et al. (US 2002/00856401).

VII. Appellants' Argument

A.   The rejection of claims 29, 33-40, 42, and 43 under 35 U.S.C. § 102(3) as being obvious over over Tang et al. (US 2004/0059821), in view of Komine et al. (US 7,281,027) and further in view of Sugikawa et al. (US 5,949,772)

a)   Independent claim 29

Applicant's claim 29 recites:

> providing, at a ***subscriber terminal device***, an ***external data transmission interface***, the external data transmission interface having a physical data transmission channel and an authentication channel configured to interface with a telecommunications network; connecting the subscriber terminal device to an internet service provider, the connection by the external data transmission interface to the internet service provider via a ***telecommunications central office exchange***

The Examiner apparently equates Applicant's

- subscriber terminal device to Tang's access device (105),
- external data transmission interface to Tang's wide area network (WAN) interface (105b), and
- telecommunications central office exchange to Tang's remote server (107).

The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004). Applicant respectfully submits that consistent with the specification (see e.g., para. [0003], [0004]) and the interpretation by one of ordinary skill in the art, a telecommunications central office exchange is a telephone switch, which handles circuit switched telephone connections and handles signals related to the connections. In contrast, Tang's remote server is for providing Point-to-Point Protocol (PPP) sessions (see e.g., Tang's Abstract). "PPP provides a standard method for transporting multi-protocol datagrams over point-to-point links" (IETF RFC 1661). One of ordinary skill in the art would not reasonably interpret a PPP server as a telecommunications central office exchange.

Applicant's claim 29 further recites:

> monitoring data traffic received on the ***external data transmission
> interface***;

The Examiner equates this limitations to "the user terminal LAN connection to the access device 105 is monitored to detect when the user terminal 101 has transmitted a request to terminal 101 has transmitted a request to terminate the PPP session, or when the WAN connection 106 to access device 105 is disconnected" (Tang., para [0053]). Thus, Tang teaches monitoring traffic received on the ***LAN connection*** for either a request to terminate the PPP session or a WAN disconnect. However, as previously noted the Examiner equates Applicant's external data transmission interface to Tang's ***WAN connection***. Applicant respectfully submits that Tang's LAN connection, which interfaces the user terminal to the access device, does not interface with a telecommunications network and would not reasonably be considered by one skilled in the art as Applicant's external data transmission. Therefore, Tang does not teach or suggest Applicant's limitation of monitoring data traffic received on the ***external data transmission interface***.

Applicant's claim 29 further recites:

> disconnecting the subscriber terminal device from the internet
> service provider by a logoff procedure in the authentication
> channel when ***no data traffic*** is received within a duration of time

The Examiner recognizes that the modified Tang (in view of Komine) fails to teach Applicant's above limitation and states that "Sugikawa et al. teaches that if any of the terminal identification data ceases to be received within a predetermined time, renders a judgment of non-communicability to delete the particular terminal from the communicable terminal memory (Sugikawa et al., Col. 28, lines 7-15)". Applicant respectfully submits that consistent with the specification and the interpretation that those skilled in the art would reach, no data traffic may indicate a variety of situations. For example, the sending device may have a fault and could not send data. Another example is the sending device is idle and simply has no data to send. Regardless of the situation, when no data traffic received within a duration of time a disconnect occurs, which results in an improved usability and reduction in cost (see e.g., para. [0007][0008]).

In contrast, Sugikawa teaches disconnecting when a periodically transmitted terminal identification is not received (see e.g., col. 27, lines 4-15). Thus, Sugikawa's disconnect occurs only if the terminal identification is not received and only for the terminal not having sent the terminal identification. Sugikawa monitors for a lack of the terminal identification, which is a specific traffic and not for the lack of receiving all data traffic. Therefore, Sugikawa teaches that a disconnect will occur if the terminal identification is not received even if data traffic other than the terminal identification is received during the duration of time.

Furthermore, Sugikawa **requires** a periodically transmitted data in order to check for the acknowledgment. Thus, by combining Tang with the Komine and Sugikawa improperly imposes the limitation of periodically transmitting data in order to check for the receipt of the data into Applicant's claim.

It is also noted that the Examiner gives the motivation to combine as the broad statement of "in order to provide a greater flexibility of the network structure, (Sugikawa et al., Col 2, lines 16-18)". However, this statement is out of context. Sugikawa, refers the prior art network of service providing devices sharing data in a wired network as being inflexible (see e.g., col 1,

lines 14-20) by not being capable of including portable devices with radio communication (see e.g. col 2, lines 5-18)". Thus, Sugikawa is referring to incorporating portable devices and not to Applicant's improved usability and reduction in cost.

Applicant respectfully submits that not only do the combine references fail to teach or suggest Applicant's limitations but the Examiner uses a random hindsight selection of references.

- Tang is directed to resolving IP addressing and PPP issues with an access device.
- Komine is directed to client/server issues and addresses the problems of abnormal terminations.
- Sugikawa addresses communication between mobile communication devices.

In view of the above, it is respectfully submitted that independent claim 29 is patentable. Furthermore, claims 32-36, which depend on claim 29, are also patentable at least based on their dependency as well as their own merits.

b)   Independent claim 37

Applicant's claim 37 includes the limitation "when ***data traffic is not detected*** within a duration of time the control unit sends a control signal to the xDSL modem and the xDSL modem starts the logoff procedure which is carried out in the authentication channel, thereby causing the connection between the xDSL modem and the internet service provider to be logged off" which is similar to the limitation "disconnecting the subscriber terminal device from the internet service provider by a logoff procedure in the authentication channel when ***no data traffic*** is received within a duration of time" of claim 29. For at least the reasons argued for claim 29 pertaining to this limitation, Applicant respectfully submits that independent claim 37 is patentable.

Furthermore, Applicant's claim 37 further recites:

> a ***control unit*** that monitors the first data traffic or the second data
> traffic and automatically controls a logon procedure and a logoff
> procedure in the authentication channel based on the monitored
> traffic

The Examiner states "the user terminal LAN connection to the access device 105 is monitored to detect when the user terminal 101 has transmitted a request to terminate the PPP session, or when the WAN connection to the access device is disconnected, (Tang et al.,

paragraph 53)]". Applicant respectfully submits that the Examiner has failed to find a ***control unit*** that monitors the data traffic. In addition, the Examiner has failed to find when data traffic is not detected within a duration of time the ***control unit sends a control signal*** to the xDSL modem.

For at least the reasons above, Applicant respectfully submits that independent clam 37 is patentable and that claims 38-43, which depend on claim 37, are also patentable at least based on their dependency as well as their own merits.

VIII. Conclusion

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. The honorable Board is therefore respectfully requested to reverse the rejection of the Examiner and to remand the application to the Examiner with instructions to allow the pending claims. Please grant any extensions of time required to enter this paper. Please charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Acct. No. 19-2179.

Respectfully submitted,

Dated: _06/01/10_   By:_____

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IX.   Claims Appendix

29.   A method for controlling an authentication in a telecommunications network, comprising:

providing, at a subscriber terminal device, an external data transmission interface, the external data transmission interface having a physical data transmission channel and an authentication channel configured to interface with a telecommunications network;

connecting the subscriber terminal device to an internet service provider, the connection by the external data transmission interface to the internet service provider via a telecommunications central office exchange;

monitoring data traffic received on the external data transmission interface and which is received by the subscriber terminal device ; and

controlling logon/logoff procedures in the authentication channel based on the monitored data traffic; and

disconnecting the subscriber terminal device from the internet service provider by a logoff procedure in the authentication channel when no data traffic is received within a duration of time.

32.   The method according to claim 29, wherein the subscriber terminal device is an xDSL modem and the external data transmission interface transmits data embodied in accordance with the ITU G.992.1 standard or the ITU G.992.2 standard.

33.   The method according to claim 29, further comprising controlling the physical data transmission channel of the external data transmission interface based on the monitored data traffic.

34.   The method according to claim 29, wherein the physical data transmission channel is always active.

35.   The method according to claim 29, further comprising:

providing, at the subscriber terminal device, an internal data transmission interface configured to interface with a data processing unit;

monitoring data traffic received by the internal data transmission interface; and

re-connecting the subscriber terminal device to the internet service provider by a logon procedure in the authentication channel when the data traffic is received by the internal data transmission interface.

36.   The method according to claim 29, further comprising:

monitoring data traffic received by the external data transmission interface; and

re-connecting the subscriber terminal device to the internet service provider by a logon procedure in the authentication channel when the data traffic is received by the external data transmission interface.

37.   A customer premises equipment, comprising:

a data processing unit;

an xDSL modem having a first interface and a second interface,

the first interface for a connection between the xDSL modem and the data processing unit in order for the xDSL modem to receive a first data traffic,

the second interface for a connection between the xDSL modem and an internet service provider via a telecommunications network exchange in order for the xDSL modem to receive a second data traffic, the second interface has an authentication channel in a layer higher than a physical data transmission layer;

the xDSL modem transfers data between the telecommunications network and the data processing unit based on the first and second data traffic, and

a control unit that monitors the first data traffic or the second data traffic and automatically controls a logon procedure and a logoff procedure in the authentication channel based on the monitored traffic,

wherein when data traffic is not detected within a duration of time the control unit sends a control signal to the xDSL modem and the xDSL modem starts the logoff procedure which is carried out in the authentication channel, thereby causing the connection between the xDSL modem and the internet service provider to be logged off.

38.   The customer premises equipment according to claim 37, wherein the first data traffic and the second data traffic are monitored.

39.   The customer premises equipment according to claim 37, wherein when the the xDSL modem is logged off from a connection to the intenet service provider and when the control unit detects the first data traffic:

the control unit sends a control signal to the xDSL modem that trigger the xDSL modem to start the logon procedure which is carried out in the authentication channel, thereby logging the xDSL modem logged on to a connection to the internet service provider.

40.   The customer premises equipment according to claim 37, wherein when the the xDSL modem is logged off from a connection to the intenet service provider and when the control unit detects the second data traffic:

the control unit sends a control signal to the xDSL modem that trigger the xDSL modem to start the logon procedure which is carried out in the authentication channel, thereby logging the xDSL modem logged on to a connection to the internet service provider.

41.   The customer premises equipment according to claim 37, wherein the second interface is embodied in accordance with the ITU G.992.1 standard or the ITU G.992.2 standard.

42.   The customer premises equipment according to claim 37, wherein the authentication channel has an authentication protocol embodied in accordance with a point-to-point protocol.

43.   The customer premises equipment according to claim 42, wherein the authentication channel has an authentication protocol embodied in accordance with a point-to-point over Ethernet protocol.

X. Evidence Appendix

None

XI. Related Procedings Appendix

None